

REMARKS/ARGUMENTS

Reconsideration is respectfully requested of the Official Action of July 11, 2003 relating to the above identified application.

With entry of the foregoing amendment, the claims in the application are 1, 3, 5, 7 to 9, 11 to 16, and 19 and 20.

The rejection of Claims 1, 3, 7 and 9 under 35 U.S.C. § 103(a) as obvious in view of *Hirooka, et al.* (US 5,330,813), taken with *Milaniak* (US 5,366,765) is traversed and reconsideration is respectfully requested. It is alleged in the Official Action that *Hirooka* teaches the invention substantially as claimed, and specifically, teaches a patch for preventing carburization containing among other materials, talc.

It is noted that the Official Action refers to examples 2,5, 7 and 8. However, these examples show titanium oxide and not talc. In fact, none of the examples include talc. Although talc is mentioned in column 3, at line 53, that list includes a large number of other materials and therefore the reference, applicants respectfully submit, does not lead a person skilled in the art to select a magnesium silicate to use in a paste, semi-liquid or liquid in combination with a boron glass forming substance.

It should also be noted that the "talc" is disclosed by *Hirooka* without reference to any percentages or proportions. It should be noted that applicants' invention resides in the use of a paste like or lacquer like material which is a hardening protection composition for partial carburization of a metallic component. Claim 1 clearly points this out.

As explained in this application, known hardening protection compositions based on substances which form boron glass run the risk of running off in the oven during the hardening operation. This is particularly a problem after incomplete drying or due to binding of moisture from the atmosphere by the composition since the viscosity of the boron compounds is greatly reduced by water at a high temperature. Moreover, at carburization temperatures of 900° to 980°C the boron compound can vaporize until vapor pressure equilibrium is established. If this occurs, there results a decrease in the protective action due to the protective layer becoming thinner. Moreover, the oven lining which contains silica containing bricks can also be attacked under those conditions.

The present applicants, faced with these problems in the industry, sought for a way to improve the situation. Thus, it was surprisingly found that the addition of magnesium-silicon compounds to the hardening protection compounds of the present invention would reduce the risk of running off of the material and reduce the vapor pressure which in turn reduces the risk of attack on the oven lining.

Hirooka does not disclose the use of paste-like or lacquer-like materials. Only patches are shown and *Hirooka* does not teach the interchangeability of applicants' materials with patches. Furthermore, the problems discussed above are not addressed in the *Hirooka* patent. Therefore, persons skilled in the art faced with those problems would not be lead to find a solution by reading the *Hirooka* patent.

The *Milaniak* patent teaches the use of a slurry for coating super alloy surfaces. However, the patent is limited to coating super alloy surfaces with an aluminum coating termed

an "aluminide protective-coating." These coatings of *Milaniak* are for protection against heating-gas corrosion and heating gas oxidation; see col. 1, lines 16-21. Thus, the teaching of a slurry to apply an aluminum coating for protection against corrosion and oxidation would not suggest the application of a paste, semi-liquid or liquid of a boron glass together with a magnesium-silicon compound to reduce running off of the material when coated on a metallic surface.. It is, therefore, apparent that there is a lack of motivation in the Examiner's combination of references, and, consequently, a person skilled in the art would find no reason, suggestion or motivation to combine the two references to arrive at applicants' invention.

The rejection of Claims 14, 15 and 16 under 35 U.S.C. § 103(a) in view of *Hirooka* is traversed and reconsideration is respectfully requested. The remarks made above apply to the process claims as well. *Hirooka* simply does not suggest the combination of elements set forth in the rejected claims. The prior art is lacking the disclosure of the paste-like or lacquer-like compositions used in the claimed process. No interchangeability has been established in the record.

There is no reason, suggestion or motivation in the *Hirooka* patent to form a liquid, semi-liquid or paste having the proportions and the characteristics set forth in the present invention. Consequently, the rejection on the ground of obviousness is not well founded and should be withdrawn.

To establish a *prima facie* obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine

reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

A statement that the modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were

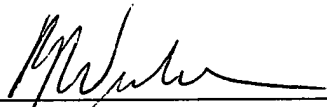
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individually known in the art is not sufficient to establish a *prima facie* obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ 2d, 1300 (Bd. Pat. App. & Int. 1993).

In view therefore, it is respectfully requested that the rejections be withdrawn and that the application be allowed at the Examiner's earliest convenience.

Respectfully submitted,

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